

Work Order ID 139583***139583***

Page 1

Item ID: D3672-3

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Washer, Phenolic

Start Date: 11/26/2015 Start Qty: 500 250.00Required Date: 12/1/2015 Req'd Qty: 250.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan: MLSDate: DEC 02 2015

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start ***NR1***Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3672

Rev C

100

0.00

100

PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 30674

Purchase Part Number: MM .500 OD X .267 ID X.031 +/- .002

Supplier: HASKINS INDUSTRIAL

Certificate of conformity is required

CL DEC 07 2015 500

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Memo

0.08

Packaging

Ensure certificate of conformity is attached

500x SP15-12-08

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

0.00

Quality Control

500DAS
38
9-89
DEC 08 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause				FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 139583

Monday, November 30, 2015 11:08:17 AM

139583

Page 2

Item ID: D3672-3 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Washer, Phenolic
Start Date: 11/26/2015 Start Qty: 250.00 ***250*** Cust Item ID:
Required Date: 12/1/2015 Req'd Qty: 250.00 ***250*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: Stosha	0.00							
130				500		0.00			
Packaging	Memo	0.04				6			DEC 08 2015
Packaging	LOCATION : FP001					9.00			
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.42							DEC 08 2015
Quality Control									

MC5 **DEC 08 2015**

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Monday, November 30, 2015 11:08:17 AM

Page 1

Work Order ID: 139583

139583

Parent Item: D3672-3

D3672-3

Parent Item Name: Washer, Phenolic

Start Date: 11/26/2015

Required Date: 12/1/2015

Start Qty: 250.00

Required Qty: 250.00

Comments: IPP Rev:A New Issue 07-09-09 JLM Verified By:EC
IPP Rev:B ECN 1056 07-11-13 DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3672-3P		Purchased	No			110	Each	0.0000	1	250			

D3672-3P

Washer

500x 8/15-12-08

DQA: _____ Date: _____



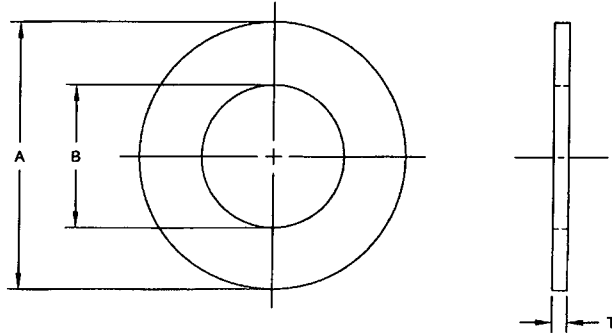
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval				
Description Work Order Deviation				Disposition							
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter		☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes		☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center		☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence	
				OTHER :							

SPECIFICATION CONTROL DRAWING



D3672-X PHENOLIC WASHER

Dart P/N	A (IN)	B (IN)	T (IN)	SUPPLIER P/N	REPLACES
D3672-1	0.437	0.210	0.031	MM .437OD x .210ID x .031 +/- .002 PHENOLIC FLAT WASHER	NAS1515H3L
D3672-3	0.500	0.267	0.031	MM .500OD x .267ID x .031 +/- .002 PHENOLIC FLAT WASHER	NAS1515H4L
D3672-5	0.562	0.326	0.062	MM .562OD x .326ID x .062 +/- .002 PHENOLIC FLAT WASHER	NAS1515H5
D3672-7	0.562	0.328	0.031	MM .562OD x .328ID x .031 +/- .002 PHENOLIC FLAT WASHER	NAS1515H5L
D3672-9	0.625	0.390	0.031	MM .625OD x .390ID x .031 +/- .002 PHENOLIC FLAT WASHER	NAS1515H6L
D3672-11	0.750	0.453	0.031	MM .750OD x .453ID x .031 +/- .002 PHENOLIC FLAT WASHER	NAS1515H7L
D3672-13	0.875	0.515	0.031	MM .875OD x .515ID x .031 +/- .002 PHENOLIC FLAT WASHER	NAS1515H8L



NOTES:

- 1) MATERIAL: PHENOLIC. PURCHASE HASKINS INDUSTRIAL INC. P/N PER TABLE (IN QUANTITIES OF 1000)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: N/A

STOP COPY
RETURN TO
ENGINEERING
CONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

139583 MJS
15-12-02

RELEASED
R 2009-12-14
MB

C	REDRAW, ADD -13 (ZN A8-1), PAR 09-038	CP	09.11.04
B	ADD -5/-7/-9/-11	DC	07.10.09
A	NEW ISSUE	DC	07.08.28
REV.	DESCRIPTION	BY	DATE
DESIGN	DC		
DRAWN	JP		
CHECKED	JA		
MFG. APPR.	WJ		
APPROVED	WJ		
DE APPR.	WJ		
DATE	09.11.04		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. REV. C
D3672 SHEET 1 OF 1
TITLE SCALE
PHENOLIC WASHER NTS

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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO30674**

Purchase Order Date 12/7/2015

PO Print Date 12/7/2015

Page Number 1 of 3

Order From :

VC-HAS001

HASKINS INDUSTRIAL
5-52 ANTARES DRIVE
NEPEAN, ON K2E 7Z1
CA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAXED

Contact Name

Vendor Phone 613 723 8800

Ship To Contact

Ship To Phone

Ship Via: Dicom

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms Net 30

Currency CAD

FOB FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	D3672-3P AS PER DWG D3672 REV. C B139583	Washer	12/10/2015 Yes 12/10/2015		500.00 Each	\$0.34	\$170.65
Line Total:							\$170.65
2	71500-30	HX-16 1/4-20 CAP SCREW	12/10/2015 Yes 12/10/2015		50.00 Each	\$0.16	\$7.84
Line Total:							\$7.84
Deliver To: CNC							
3	71500-30	HX-37 3/8-16 CAP SCREW	12/10/2015 Yes 12/10/2015		25.00 Each	\$0.39	\$9.78

Note:

12/7/2015

HASKINS INDUSTRIAL INC.
5-52 ANTARES DRIVE

*** B A C K O R D E R ***

Order # 1259929.00

NEPEAN, ONTARIO K2E 7Z1
TEL (613) 723-8800 FAX (613) 723-8806

Order Date 12/07/15

Page 1 of 1

Sold To: DART AEROSPACE LTD.
1270 ABERDEEN STREET
HAWKESBURY
ON
K6A 1K7

Ship To: DART AEROSPACE LTD.
1270 ABERDEEN STREET
HAWKESBURY
ON
K6A 1K7

Cust Phone #

Warehouse
OTTAWA

F.O.B.
DEST

Taken By
Sylvie 613-723-880

Cust #	Customer P/O #	Required	Orig Order	Slsm	Ship Via	Terms
05168	30674	12/08/15	1259929.00	PL	DICOM	NET 30

Ln#	Bin #	Order UM	Ship	B/O	Product	Description
-----	-------	----------	------	-----	---------	-------------

1		50 C	0	50	SP1X100	HX-16 1/4-20 X 1 SKT HD C/S
2		25 C	0	25	SP1X100	HX-37 3/8-16X3 SKT HD C/S
3		50 C	0	50	SP1X100	HC-10 1/4-20X3/4 HEX HD BOLT
4		50 C	0	50	SP1X100	HC-43 3/8-16 X 1 HEX C/S
5		100 C	0	100	SP1X100	HN-2010 1/4 NUT
6	CAB810	500 EA	500		MMS-D3672-3	.500 X .267 X .031 +/- .005 WASHER, PHEN
7	020230	100 EA	100		3M-AB20030360 AB20030	3" X HN 60G 988R DISC, ROLOC AB20030

SP15-12-08

PLEASE NOTE:

1. NO RETURNS WITHOUT PRIOR AUTHORIZATION
2. ALL SHORTAGE CLAIMS MUST BE WITHIN 10 DAYS
3. BO CODE: BO = QTY NOT SHIPPED IS BACK-ORDERED
CL= QTY NOT SHIPPED WAS CANCELLED
SC= ITEM CONSIDERED COMPLETE - NO B/O CREATED

FILL PACK DATE 12/17/15
Printed on 2015-12-07 at 9:29